

Remarks

Reconsideration of this Application and entry of this Amendment is respectfully requested. Upon entry of the foregoing amendment, claims 1-12 and 17-19 are pending in the application, with 1, 9, and 17 being the independent claims. Claims 1, 3, 7, 9, 11, 12, and 17 are amended. Claims 13-16 are canceled without disclaimer of or prejudice to the subject matter thereof. These changes are believed to introduce no new matter, and their entry is respectfully requested.

Based on the above amendment and the following remarks, Applicant respectfully requests that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

Examiner Interview August 7, 2007

Applicant appreciates the consideration extended to Applicant's representative during the personal interview of August 7, 2007. The Interview Summary (Paper No. 20070807) accurately reflects the substance of the interview and is incorporated by reference herein. However, although the Examiner indicated that an agreement "was not reached" as to the allowability of the claims, it is Applicant's understanding that the claims as amended above were agreed to be patentable over U.S. Patent No. 6,348,171 to Dewar et al., U.S. Patent No. 7,182,893 to Olaru, and U.S. Patent No. 6,413,076 to Dray, Sr., which were the references applied in rejecting the claims in the Office Action. The Examiner indicated that agreement was not reached in order to update the search on the claims as amended.

Amendment of the Specification

Applicant has amended paragraphs [0014] and [0015] of the specification to correct an inaccuracy in terminology identified by the Applicant, wherein the term "back plate" rather than "machine platen" should have been used to identify item 144 in FIGS. 1 and 3 and item 444 in FIG. 4. The amendment is fully supported by the figures provided, particularly with reference to the injection molding system 400 shown in FIG. 4.

Rejections Under 35 U.S.C. §102(b) and (e)

Claims 1, 3, 7, 9, 11, 12 and 17-19 are rejected under 35 U.S.C. §102(b) as being anticipated by USPN 6,348,171 to Dewar et al. and claims 1-3 and 5-12 are rejected under 35 U.S.C. §102(e) as being anticipated by USPN 7,182,893 to Olaru.

With respect to the 102(b) rejections of independent claims 1, 9 and 17, Dewar '171 does not disclose an anti-drool mechanism including a melt passage with a fixed pin having a head portion configured to be received within a machine nozzle disposed at least partially within the melt passage, and also having a movable shut-off collar disposed at least partially within the melt passage and surrounding the fixed pin.

As shown in FIGS. 3 and 4 of Dewar '171, the mechanism for melt control is used in a stack mold 110 at the parting line 112. Col. 4, line 63- col. 5, line 7. The melt control valve assembly 134 has a first flow control valve unit 136 situated within stationary platen 116 and a second flow control valve unit 138 situated in central moving platen 118. Col. 5, lines 20-43. First flow control valve unit 136 has a movable valve pin 140 actuated by a valve pin actuator 142 (see FIG. 3) and second flow control valve unit 138 has a movable valve pin 150 actuated by a valve pin actuator 152 (see FIG. 4). *Id.* Of note Dewar '171 clearly states in discussion of the first embodiment that item 32 is an actuator controlled by a CPU, which is not a shut-off collar as claimed in claims 1, 9 and 17. Col. 3, lines 59-60 and col. 4, lines 36-57.

With respect to the 102(b) rejection of independent claim 17, the Dewar '171 patent does not disclose a sprue bushing having a melt passage with a fixed pin and shut-off collar arrangement as claimed. In Dewar '171 the Examiner relies on a valve pin bushing 34 as a sprue bushing. Office Action pp. 3-4. Valve pin bushing 34 along with plug 36 support shaft 28 of piston 12 to maintain shaft 28 centrally within melt passage 14. Col. 49-64; FIGS. 1 and 2. Of note valve pin bushing 34 is outside/sealed from melt passage 14 (see col. 3, lines 58-61) and does not nor would not have a melt passage as claimed.

Of note a machine nozzle is not shown in any of the figures of the Dewar '171 patent but would be used to deliver melt via molding machine inlet 120. Col. 5, lines 8-10; FIG. 3. Item 130 identified by the Examiner as a "machine nozzle" (see Office Action p. 3) is one of the injection molding nozzles for delivering the melt stream to a mold cavity. Col. 5, lines 17-19.

Applicant has amended each of the independent claims 1, 9, and 17 to clarify the position of the anti-drool mechanism within the injection molding system as being located to receive a melt from the machine nozzle and to deliver the melt to the manifold. In addition, claims 1 and 9 have been amended to recite a “movable” rather than “actuated” shut-off collar to alleviate any confusion as to what structure is being claimed. These amendments are fully supported by the specification, particularly paragraphs [0015] – [0017].

For at least the foregoing reasons, independent claims 1, 9 and 17 are patentable over and not anticipated by Dewar ‘171. Claims 3 and 7 which depend from and add further features to claim 1, claims 11 and 12 which depend from and add further features to claim 9 and claims 18 and 19 which depend from and add further features to claim 17 are patentable for at least the reasons presented above with respect to the independent claims. While it is not necessary to address the Examiner’s rejection of the dependent claims at this time, Applicant reserves the right to support their patentability, when necessary.

With respect to the 102(e) rejection of independent claim 1, Olaru ‘893 does not disclose an anti-drool mechanism including a melt passage with a fixed pin having a head portion configured to be received within a machine nozzle disposed at least partially within the melt passage, and also having a movable shut-off collar disposed at least partially within the melt passage and surrounding the fixed pin. Olaru ‘893 discloses a valve-gated nozzle 14 with a reciprocating valve pin 11 for opening and closing a mold gate 34 of a mold cavity 36. Col. 2, lines 29-61; FIG. 1. The valve pin 11 is actuated by an actuator 36, which is not a movable shut-off collar as claimed. Col. 2, lines 62-63. Of note a machine nozzle is not shown in any of the figures of this patent. See col. 2, lines 29-34. For at least the foregoing reasons, independent claim 1 is patentable over and not anticipated by Olaru ‘893. Claims 2, 3, and 5-12 which depend from and add further features to claim 1 are patentable for at least the reasons presented above with respect to the independent claim. While it is not necessary to address the Examiner’s rejection of the dependent claims at this time, Applicant reserves the right to support their patentability, when necessary.

Rejections Under 35 U.S.C. §103(a)

The Examiner rejected claims 4 and 17-19 under 35 U.S.C. §103(a) as being unpatentable over Olaru '893 in view of U.S. Patent No. 6,413,076 to Dray, Sr.

With respect to independent claim 17, as discussed above the Olaru '893 patent discloses a valve-gated nozzle 14 that feeds melt to a mold cavity and does not disclose a fixed pin and shut-off collar arrangement within a sprue bushing as claimed. The Dray '076 patent does not make-up for the deficiencies in Olaru '893. Although the shut-off nozzle of Dray '076 actually discloses a machine nozzle (17, 117) that engages a sprue bushing (not numbered), Dray '076 does not disclose a fixed pin and shut-off collar arrangement within a sprue bushing melt channel as claimed. For at least the foregoing reasons, independent claim 17 is patentable over and not obvious in view of the combination of the Olaru '893 and Dray '076 patents. Claims 18 and 19 which depend from and add further features to claim 17 are patentable for at least the reasons presented above with respect to the independent claim. While it is not necessary to address the Examiner's rejection of the dependent claims at this time, Applicant reserves the right to support their patentability, when necessary.

Claim 4 depends from and adds further features to claim 1 and is patentable for at least the reasons presented above with respect to the independent claim, as the Dray '076 patent does not make-up for the deficiencies in Olaru '893 with respect to the obviousness rejection of claim 1. While it is not necessary to address the Examiner's rejection of the dependent claim at this time, Applicant reserves the right to support its patentability, when necessary.

Third Supplemental Information Disclosure Statement

Applicant files herewith a Third Supplemental Information Disclosure Statement under 37 C.F.R. §1.97(c) with an accompany fee under 37 C.F.R. §1.17(p). Applicant requests that the Examiner consider the references cited thereon and return a copy of the initialed PTO/SB/08a with the next action.

Conclusion

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider all presently outstanding objections and rejections and that

they be withdrawn. Applicant believes that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided below.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

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